

Head Start

Benefit-cost estimates updated December 2014. Literature review updated December 2013.

Current estimates replace old estimates. Numbers will change over time as a result of model inputs and monetization methods.

The WSIPP benefit-cost analysis examines, on an apples-to-apples basis, the monetary value of programs or policies to determine whether the benefits from the program exceed its costs. WSIPP's research approach to identifying evidence-based programs and policies has three main steps. First, we determine "what works" (and what does not work) to improve outcomes using a statistical technique called meta-analysis. Second, we calculate whether the benefits of a program exceed its costs. Third, we estimate the risk of investing in a program by testing the sensitivity of our results. For more detail on our methods, see our [technical documentation](#).

Program Description: Head Start is a federal program that funds early childhood education, social services and health services to children ages 0-5. Studies in this analysis focus on center-based Head Start programs for 3- and 4- year olds.

Benefit-Cost Summary

Program benefits

Participants	\$12,148
Taxpayers	\$7,786
Other (1)	\$7,847
Other (2)	(\$3,054)
Total	\$24,728
Costs	(\$8,661)
Benefits minus cost	\$16,068

Summary statistics

Benefit to cost ratio	\$2.86
Benefits minus costs	\$16,068
Probability of a positive net present value	83 %

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2013). The economic discount rates and other relevant parameters are described in our [technical documentation](#).

Detailed Monetary Benefit Estimates

Source of benefits	Benefits to				Total benefits
	Participants	Taxpayers	Other (1)	Other (2)	
From primary participant					
Crime	\$0	\$925	\$2,764	\$460	\$4,149
Labor market earnings (hs grad)	\$12,028	\$5,130	\$5,948	\$0	\$23,106
K-12 grade repetition	\$0	\$50	\$0	\$25	\$75
Public assistance	(\$3)	\$8	\$0	\$0	\$6
Health care (educational attainment)	(\$187)	\$1,466	(\$1,081)	\$729	\$926
Subtotals	\$11,838	\$7,580	\$7,630	\$1,214	\$28,262
From secondary participant					
Crime	\$0	\$33	\$95	\$16	\$145
Labor market earnings (hs grad)	\$299	\$128	\$148	\$0	\$574
Child abuse and neglect	\$15	\$5	\$0	\$2	\$23
Out-of-home placement	\$0	\$1	\$0	\$1	\$2
K-12 grade repetition	\$0	\$5	\$0	\$2	\$7
Health care (educational attainment)	(\$4)	\$35	(\$26)	\$17	\$22
Subtotals	\$310	\$207	\$217	\$39	\$773
Adjustment for deadweight cost of program	\$0	\$0	\$0	(\$4,307)	(\$4,307)
Totals	\$12,148	\$7,786	\$7,847	(\$3,054)	\$24,728

We created the two “other” categories to report results that do not fit neatly in the “participant” or “taxpayer” perspectives. In the “Other (1)” category we include the benefits of reductions in crime victimization, the economic spillover benefits of improvement in human capital outcomes, and the benefits from private or employer-paid health insurance. In the “Other (2)” category we include estimates of the net changes in the value of a statistical life and net changes in the deadweight costs of taxation.

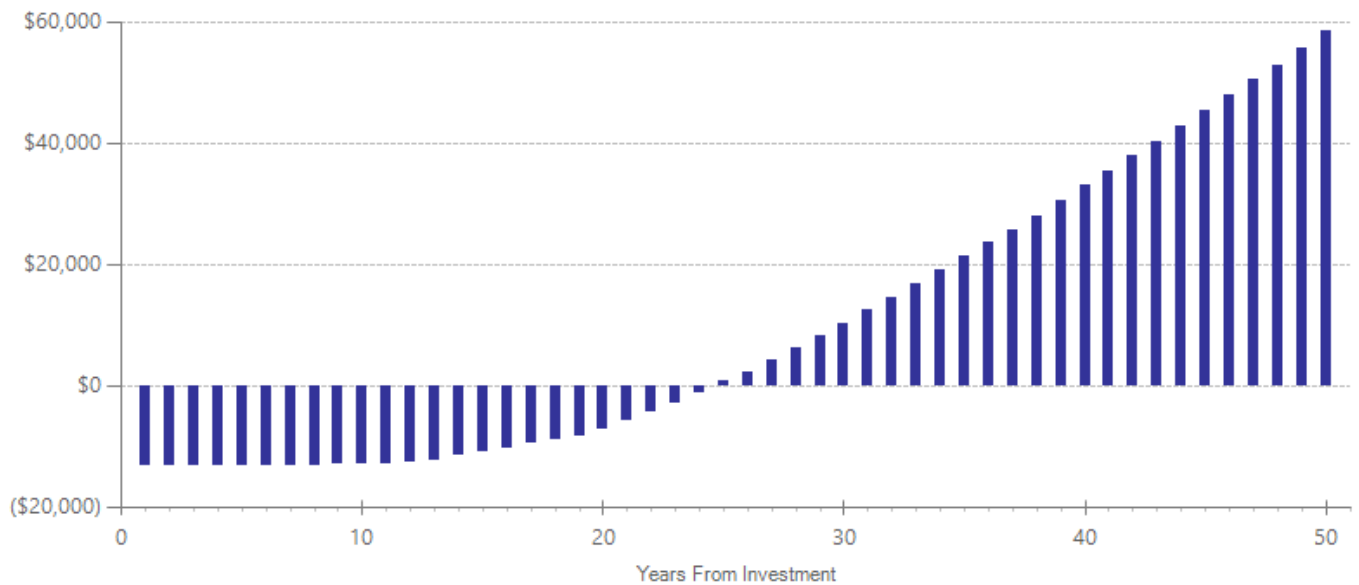
Detailed Cost Estimates

	Annual cost	Program duration	Year dollars	Summary statistics	
Program costs	\$9,469	1	2012	Present value of net program costs (in 2013 dollars)	(\$8,661)
Comparison costs	\$903	1	2012	Uncertainty (+ or - %)	10 %

Costs calculated using a weighted average of HS, AIAN HS and MS HScosts including administration per slot; Comparison group costs were calculated by dividing the cost of ECEAP (\$55,867,278) by the number of children who are eligible but not served by HS (32,291); The number of eligible students includes all ECEAP students; http://www.del.wa.gov/publications/partnerships/docs/ECEAP_HS_Profile_2012.pdf.

The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta analysis. The uncertainty range is used in Monte Carlo risk analysis, described in our [technical documentation](#).

Cumulative Net Cash Flows Over Time (Non-Discounted Dollars)



Meta-Analysis of Program Effects

Outcomes measured	Primary or secondary participant	No. of effect sizes	Treatment N	Unadjusted effect size (random effects model)		Adjusted effect sizes and standard errors used in the benefit-cost analysis					
				ES	p-value	First time ES is estimated			Second time ES is estimated		
						ES	SE	Age	ES	SE	Age
Test scores	Primary	7	4750	0.172	0.001	0.172	0.027	4	0.036	0.006	17
K-12 grade repetition	Primary	5	1738	-0.075	0.572	-0.075	0.133	12	-0.075	0.133	12
High school graduation	Primary	2	517	0.181	0.018	0.181	0.077	18	0.181	0.077	18
Crime	Primary	2	517	-0.183	0.497	-0.183	0.270	21	-0.183	0.270	31
Teen births under age 18	Primary	1	327	-0.466	0.111	-0.466	0.292	19	-0.466	0.292	19
Teen births (second generation)	Secondary	1	327	-0.466	0.111	-0.466	0.292	19	-0.466	0.292	19

Citations Used in the Meta-Analysis

- Abbott-Shim, M., Lambert, R. and McCarty, F. (2003). A comparison of school readiness outcomes for children randomly assigned to a Head Start program and the program's wait list. *Journal of Education for Students Placed at Risk*, 8(2), 191- 214.
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